

Draft Industry Profile of the Paper, Film, and Foil Coatings Industries

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This memorandum will present a draft profile of the paper, film, and foil coatings industries. The memorandum reflects information collected to date on these industries. It will be updated and revised as additional information is collected.

SIC Codes of Affected Industries

One of the first steps in developing an industry profile is to identify the industries that are likely to be affected by the standards. Industries are typically classified by standard industrial classification (SIC) code. Identifying the SIC codes of interest allows us to conduct searches of EPA and other data bases by SIC code. Industry typically wants to know which SIC codes are going to be covered by a particular standard.

Using the 1977 CTG developed by EPA for the paper coatings industry, Control of Volatile Organic Emissions from Existing Stationary Sources: Volume II: Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks, information contained in the printing and publishing background information document (BID), and the 1987 Standard Industrial Classification Manual, we have identified 2 preliminary lists of SIC codes. The first list, which is presented in Table 1, includes those SIC codes that we are fairly certain include industries that will be affected by the standards. While all of the products manufactured by the facilities included in these SIC codes will not be covered under the standards, these SIC codes include the manufacture of at least some products that are expected to be covered. Table 2 includes a list of SIC codes for industries that may be affected by the regulations. As we collect additional information on the industry, we will work to merge the 2 lists into one that will include all of the affected SIC codes.

Table 3 includes a list of all the SIC codes of potential interest, the distribution of facilities within the SIC codes by size, and the leading States (in employment) for each SIC code.

Table 1. SIC Codes of Affected Industries

SIC	SIC Name	Examples of Products Manufactured
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2671	Packaging Paper and Plastics Film, Coated and Laminated	Packaging paper, plastics film for packaging, waxed paper, wrapping paper
2672	Coated and Laminated Paper, Not Elsewhere Classified	Book paper, cellophane adhesive tape, masking tape, pressure sensitive paper and tape
2673	Plastics, Foil, and Coated Paper Bags	Frozen food bags, merchandise bags
2675	Die-Cut Paper and Paperboard and Cardboard	Cardboard, egg cartons, filing folders
2677	Envelopes	Envelopes
2679	Converted Paper and Paperboard Products, NEC	Crepe paper, corrugated paper, Wallcoverings
2761	Manifold Business Forms	Business forms, computer forms
2771	Greeting Cards	Greeting cards
3053	Gaskets, Packing, and Sealing Devices	Gaskets, oil seals, rubber packing
3069	Fabricated Rubber Products, Not Elsewhere Classified	Balloons, Foam rubber, rubberbands, rubber pressure sensitive tape
3081	Unsupported Plastics Film and Sheet	Plastics film, polypropylene film and sheet, photographic, micrographic, and X-ray plastics, sheet, and film
3291	Abrasive products	Abrasive-coated products, sandpaper
3861	Photographic Equipment and Supplies	Blueprint cloth or paper, Sensitized film for motion pictures, X-ray, still camera; photographic paper and cloth, X-ray film
3955	Carbon Paper and Inked Ribbons	Carbon paper, inked ribbons, stencil paper

Table 2. SIC Codes for Other Potentially Affected Industries

SIC	SIC Name	Examples of Products Manufactured
2621	Paper Mills	Book paper, printing paper, writing paper
2631	Paperboard Mills	Cardboard, milk carton board, pressboard
2676	Sanitary Paper Products	Facial tissues, napkins, toilet paper
2678	Stationery, Tables, and Related Products	Notebooks, stationery, tablets and pads
2721	Periodicals: Publishing, or Publishing and Printing	Magazines, periodicals, trade journals
2731	Books: Publishing, or Publishing and Printing	Books, pamphlets, textbooks
2732	Book Printing	Books, pamphlets, textbooks
2741	Miscellaneous Publishing	Calendars, maps, telephone directories
2752	Commercial Printing, Lithographic	Business forms, labels, playing cards, posters
2754	Commercial Printing, Gravure	Same as 2752
2759	Commercial Printing, NEC	Same as 2752
3497	Metal foil and leaf	Foil containers, tin foil
3996	Hard Surface Floor Coverings, NEC	Linoleum, floor tile

Emissions Data

We have conducted a literature search and we have done a search of EPA's AIRS data base, the BACT/LAER Information System (BLIS) data base, and the Toxic Release Inventory (TRI) data base in order to collect emissions data on the industry. To date, the only significant source of emissions data we have found is EPA's TRI data base. This data base contains information collected from facilities that are subject to Section 313 of the Emergency Planning and Community Right-to-Know-Act (EPCRA). Facilities are subject to the reporting requirements of EPCRA if they manufacture, import, or process more than 25,000 pounds/year of any of the listed chemicals. While most HAP are included on the list, there are a few that are not. Because the list is much

more extensive than the list of 189 HAP, there are also many chemicals that must be reported that are not HAP.

We performed a search of the TRI data base by SIC codes. At this time we have only completed a search of those SIC codes that are listed in Table 1, that is, those that we are fairly certain include the manufacture of products that will be subject to the regulations for the paper, film, and foil coating industries. Table 4 includes a summary of the data collected for the SIC codes of interest. Table 5 presents the total emissions from all SIC codes of the 10 pollutants emitted in the greatest amounts.

Table 5. Total Emissions for SIC Codes of Interest

Pollutant	HAP (Yes/No)	Total Emissions (lbs/year)
Toluene	Yes	24,175,288
Methanol	Yes	5,635,059
Methyl ethyl ketone	Yes	5,184,720
Dichloromethane	Yes	5,027,475
Acetone	No	4,907,817
Hydrochloric acid	Yes	2,371,950
Xylene	Yes	1,331,754
Cyclohexane	No	821,957
Ethylene glycol	Yes	564,486
1,1,1-Trichloroethane	No	509,519

While the TRI data base does contain a significant amount of emissions data, it is limited. The only information we have on the facilities in addition to the emissions data is the facility name, location, and a facility contact. The data base does not contain any information concerning the types of products manufactured, the manufacturing process, or the number of employees. It is likely that some quantity of the emissions reported are generated from the production of products that will not be covered under this regulation. We would have to contact the facility contact to find out more about the source of the emissions.

Another potential source of emissions is existing test reports. We have recently obtained a listing of test reports from approximately 20 facilities that are expected to be covered under this regulation. Most of the facilities have add-on

control devices, and the testing was done to demonstrate compliance with either State regulations or the new source performance standards (NSPS) for the industry. We are currently reviewing those test reports to evaluate their potential usefulness. In some cases the process data are limited, so even though the reports contain emissions data they may be of limited use. However, some of the reports also contain some process data.

Existing Regulations

The existing State and Federal regulations for the industry focus primarily on VOC emissions. While some State agencies have regulations targeted towards reducing air toxics emissions, these are not specific to particular industries. The only Federal regulations in place are new source performance standards that limit VOC emissions.

The majority of the State regulations are consistent with the recommended RACT levels in Volume II of the 1977 CTG: Control of Volatile Organic Emissions from Existing Stationary Sources - Surface Coating of Cans, Coils, Paper, Fabrics, Automobiles, and Light-Duty Trucks. The regulations limit the VOC content of the coatings to 0.35 kg/L (2.9 lb/gal), minus water. California's South Coast Air Quality Management District (SCAQMD), whose Rule 1128 covers paper, fabric, and film coating, has more stringent limits in place and is considering tightening them. Table 6 presents SCAQMD's current and proposed limits. The proposed limits are based on a preliminary draft staff report issued by SCAQMD personnel. Therefore, the proposed limits may change in the future.

Some of the processes and products covered under California Rule 1128 such as fabric dyeing, carpet, and magnetic tape will not be covered under this regulation because they are covered or will be covered under other regulations. However, the majority of the products will be covered under this regulation.

Table 6. Current and Proposed Limits under SCAQMD Rule 1128¹

Coating Category or Industry	Current Limit (g/L)	Proposed Limit (g/L)
Paper Adhesive	265	0
Paper Silicone Release	265	0
Fabric Dyeing	265	0
Carpet	265	10

Corrugated Paper	265	10
Asphalt Paper Coating	265	15
Plastisol	20	20
Soft Paper Products	265	30
Bonded Fiber	265	60
Flame Retardant	265	60
Paper Topcoat	265	100
Blueprint Paper	265	150
Magnetic Tape	265	150
Photo Films	265	150
Wash Primer	265	150
Vellum Paper	265	150
Solar Control Film	265	150
Vinyl Coatings	265	150
Prepreg	265	150
Silicone Rubber Coating	265	150

References

¹ Preliminary Draft Staff Report: Technology Review for Adhesives, Coatings, Inks, and Solvents, October 18, 1995. South Coast Air Quality Management District.